

Amendments to the Claims:

Please cancel claims 7, 12, 28, 29, 32, 34, 35 and 39 without prejudice or disclaimer.

1. (Currently Amended) A power transformer/reactor having at least one winding, including at least one comprising a flexible cable having a current-carrying conductor including a plurality of insulated strands and at least one uninsulated strand; and an insulation system including a first layer with having semiconducting properties surrounding the conductor and being in contact therewith; a solid insulating layer surrounding the first layer; and a second layer with semiconducting properties surrounding the insulating layer.
2. (Previously Amended) A power transformer/reactor according to claim 1, wherein the first layer is at substantially the same potential as the conductor.
3. (Previously Amended) A power transformer/reactor according to claim 1, wherein the second layer comprises an equipotential surface surrounding the conductor.
4. (Previously Amended) A power transformer/reactor according to claim 1, wherein the second layer is connectable to earth potential.
5. (Previously Amended) A power transformer/reactor according to claim 1, wherein the first and second semiconducting layers and the insulating layer have substantially the same coefficient of thermal expansion such that, upon a thermal movement in the winding, defects, cracks or the like do not arise in the boundary layer between the semiconducting layers and the insulating part.
6. (Previously Amended) A power transformer/reactor according to claim 1, wherein the first and second layers have respective contact surfaces secured to corresponding surfaces of the adjacent insulating layer each of the semiconducting layers is secured to the adjacent solid insulating layer along essentially the whole contact surface.

7. (Cancelled)

8. (Currently Amended) A power transformer/reactor according to claim 7, wherein the cable is manufactured with a conductor area which is between about 30 and 3000 mm² and with an outer cable diameter which is between about 20 and 250 mm.

9. (Previously Amended) A power transformer/reactor according to claim 1, wherein at least one of the first and second layers and the solid insulation comprise polymeric materials.

10. (Previously Amended) A power transformer/reactor according to claim 1, wherein the winding is free of partial discharge.

11. (Previously Amended) A power transformer/reactor according to claim 1, wherein the solid insulation comprises an extrusion.

12. (Cancelled)

13. (Previously Amended) A power transformer/reactor according to claim 1, wherein the cable is substantially void free.

14. (Previously Amended) A power transformer/reactor according to claim 1, wherein the power transformer/reactor comprises a core of magnetic material.

15. (Previously Amended) A power transformer/reactor according to claim 1, wherein the power transformer/reactor comprises an iron core including core limbs and yokes.

16. (Previously Amended) A power transformer/reactor according to claim 1 wherein the power transformer/reactor is air wound and formed without an iron core.

17. (Previously Amended) A power transformer/reactor according to claim 1, further comprising at least two galvanically separated concentrically wound windings.

18. (Previously Amended) A power transformer/reactor according to claim 1, wherein the power transformer/reactor is connectable to a plurality of voltage levels.

19. (Previously Amended) A power transformer/reactor according to claim 1, wherein the windings include terminals in the form of power cable terminations.

20. (Previously Amended) A power transformer/reactor according to claim 1, wherein the insulation layer is formed of a solid electrical insulation, substantially all of the electrical insulation in the transformer/reactor is enclosed between the conductor and the second layer of the windings.

21. (Currently Amended) A power transformer/reactor according to claim 1, wherein the cables includes means for sustaining a high voltage at transmission levels including of at least one of greater than 10kV, 36kV, 75.5kV, 400kV and 800kV.

22. (Currently Amended) A power transformer/reactor according to claim 1, wherein the transformer/reactor is designed for a power range in excess of at least 0.5 MVA and 30 MVA.

23. (Previously Amended) A power transformer/reactor according to claim 1, wherein the power transformer/reactor includes cooling means comprising at least one of liquid and gas at earth potential.

24. (Currently Amended) A method for electric field control in a power transformer/reactor comprising the steps of:

forming a magnetic field generating circuit having at least one winding with-in the form of a flexible cable having at least one electrical conductor and an insulation layer and at least one outer layer externally thereof, wherein the insulation is formed by system surrounding the conductor;

forming the conductor with a plurality of insulated conductive strands and at least one uninsulated conductive strand;

forming the insulation system of an inner semiconducting layer contacting the conductor, a solid insulation material surrounding the inner layer; and said an outer layer surrounding the solid insulation being connected to ground or otherwise a relatively low potential and having an electrical conductivity higher than the conductivity of the insulation but lower than the conductivity of the electrical conductor so as to equalize potential and cause the electrical field to be substantially enclosed in the winding internally of the outer layer.

25. (Currently Amended) A method according to claim 24, wherein a flexible cable is used as a winding and the winding of the cable to form the winding of the transformer/reactor is assembled on-site.

26. (Previously Presented) A method according to claim 24, further comprising connecting the outer layer to near ground potential.

27. (Currently Presented) A high voltage electric machine comprising at least one of a transformer and reactor including a winding in the form of a flexible cable including at least one current-carrying conductor comprising a plurality of insulated strands and at least one uninsulated strand; and a magnetically permeable, electric field confining cover surrounding the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine; and wherein the cover comprises an insulating surrounding the conductor and an outer layer surrounding the insulating system including an inner semiconducting layer in contact with the conductor, and a solid insulation layer, surrounding the inner layer an an layer having a conductivity sufficient to establish an equipotential surface surrounding the conductor;

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Currently Amended) The machine of claim 27, wherein the cover insulation system is substantially void free.

32. (Cancelled)

33. (Currently Amended) The machine of claim 27, wherein the layers of the cover-inner layer, the outer layer and the solid insulation layer have substantially the same temperature coefficient of expansion.

34. (Cancelled)

35. (Cancelled)

36. (Currently Amended) The machine of claim 27, wherein the winding is operable free of partial discharge and field control.

37. (Previously Presented) The machine of claim 27, wherein the winding comprises multiple uninterrupted turns.

38. (Previously Presented) The machine of claim 27, wherein the cable comprises a transmission line.

39. (Cancelled)